

	Final Report
V	Revised Report

Report Date: 13-Feb-18 17:49

## Laboratory Report SC43152

Gulf Oil L.P. 281 Eastern Avenue Chelsea, MA 02150 Attn: Andrew P. Adams

Project: Gulf Terminal - Chelsea, MA

Project #: Gulf Chelsea

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.

All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110 Connecticut # PH-0777 Florida # E87936 Maine # MA138 New Hampshire # 2972/2538 New Jersey # MA011 New York # 11393 Pennsylvania # 68-04426/68-02924 Rhode Island # LAO00348 USDA # P330-15-00375 Vermont # VT-11393



Authorized by:

Christina White Technical Director

Christina a. White

Eurofins Spectrum Analytical holds primary certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.

Please note that this report contains 13 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

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Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

### **Sample Summary**

Work Order: SC43152

**Project:** Gulf Terminal - Chelsea, MA

**Project Number:** Gulf Chelsea

Laboratory ID	Client Sample ID	<u>Matrix</u>	<b>Date Sampled</b>	<b>Date Received</b>
SC43152-01	Outfall 003	Surface Water	13-Jan-18 11:10	15-Jan-18 17:16
SC43152-02	TB-1	Aqueous	13-Jan-18 00:00	15-Jan-18 17:16

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### **CASE NARRATIVE:**

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the reporting limit are reported as "<" (less than) the reporting limit in this report.

The samples were received -0.1 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group. If method or program required MS/MSD/Dup were not performed, sufficient sample was not provided to the laboratory.

Analyses for Total Hardness, pH, and Total Residual Chlorine fall under the state of Pennsylvania code Chapter 252.6 accreditation by rule.

### February 13, 2018 Report Revision Case Narrative:

This report has been re-issued to only include benzo(a)pyrene and naphthalene for 8270 per client request.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

### SW846 8260C

### Calibration:

### 1801052

Analyte quantified by quadratic equation type calibration.

Naphthalene

This affected the following samples:

1800666-BLK1 1800666-BS1 1800666-BSD1 Outfall 003

S815896-ICV1 S816003-CCV1

TB-1

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### **Sample Acceptance Check Form**

Project:	Gulf Terminal - Chelsea, MA / Gulf Chelsea			
Work Order:	SC43152			
Sample(s) received on:	1/15/2018			
The following outlines th	ne condition of samples for the attached Chain of Custody upon receipt.			
		<u>Yes</u>	<u>No</u>	<u>N/A</u>
Were custody sea	als present?		$\checkmark$	
Were custody sea	als intact?			$\checkmark$
Were samples re	ceived at a temperature of $\leq 6^{\circ}$ C?	<b>✓</b>		
Were samples re	frigerated upon transfer to laboratory representative?	<b>/</b>		
Were sample cor	ntainers received intact?	<b>✓</b>		
	operly labeled (labels affixed to sample containers and include sample ID, site project number and the collection date)?	$\overline{\checkmark}$		
Were samples ac	companied by a Chain of Custody document?	$\checkmark$		
include sample I	ustody document include proper, full, and complete documentation, which shall D, site location, and/or project number, date and time of collection, collector's name, e, sample matrix and any special remarks concerning the sample?	$\overline{C}$		
Did sample cont	ainer labels agree with Chain of Custody document?	$\checkmark$		
Were samples re	ceived within method-specific holding times?	<b>~</b>	П	П

Client:

Gulf Oil L.P.

### **Summary of Hits**

**Lab ID:** SC43152-01

Client ID: Outfall 003

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Oil & Grease	1.80		1.00	mg/l	EPA 1664B
Total Suspended Solids	14.0		0.7	mg/l	SM2540D (11)
Benzene	1.6		1.0	$\mu g/l$	SW846 8260C
Naphthalene	2.0		1.0	$\mu g/l$	SW846 8260C
Naphthalene	0.689		0.047	$\mu g/l$	SW846 8270D SIM

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

Sample Id Outfall 00 SC43152-	-			Client P			<u>Matrix</u> Surface Wa	-	ection Date 3-Jan-18 11			<u>ceived</u> Jan-18	
CAS No.	Analyte(s)	Result	Flag	Units *RDL MDL Dilution			Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.	
Volatile O	rganic Compounds												
_	rganic Aromatics by SW8 by method SW846 5030												
71-43-2	Benzene	1.6		μg/l	1.0	0.3	1	SW846 8260C	17-Jan-18	18-Jan-18	GMA	1800666	
91-20-3	Naphthalene	2.0		μg/l	1.0	0.4	1	"	"	"	"	"	
Surrogate i	recoveries:												
460-00-4	4-Bromofluorobenzene	101			70-13	80 %		"	"	"	•	"	
2037-26-5	Toluene-d8	100			70-13	80 %			"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	94		70-130 %				"	"	"	"	"	
1868-53-7	Dibromofluoromethane	94			70-13	80 %		"	"	"	"	"	
Semivolati	ile Organic Compounds by	GCMS											
SVOCs by	y SIM												
Prepared	by method SW846 35100	<u>2</u>											
50-32-8	Benzo (a) pyrene	< 0.047		μg/l	0.047	0.019	1	SW846 8270D SIM	16-Jan-18	25-Jan-18	MSL	1800581	
91-20-3	Naphthalene	0.689		μg/l	0.047	0.020	1	"	"	"	"	"	
Surrogate i	recoveries:												
205440-82-0	Benzo (e) pyrene-d12	74			30-13	80 %		u u	n	"	"	"	
	le Petroleum Hydrocarbon by method General Prepa												
	Oil & Grease	1.80	OG	mg/l	1.00	0.915	1	EPA 1664B	17-Jan-18	18-Jan-18	SC	1800667	Х
General C	hemistry Parameters												
	рН	6.73	рН	pH Units			1	ASTM D 1293-99B	16-Jan-18 17:00	18-Jan-18 18:01	BD	1800638	Х
	Total Suspended Solids	14.0		mg/l	0.7	0.3	1	SM2540D (11)	19-Jan-18	20-Jan-18	BD	1800754	Х

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Sample Id TB-1 SC43152-	entification 02			Client Project # Gulf Chelsea			Matrix Aqueou		ection Date Jan-18 00		Received 15-Jan-18		
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
	rganic Compounds	46 9260											
	rganic Aromatics by SW8 by method SW846 5030												
71-43-2	Benzene	< 1.0		μg/l	1.0	0.3	1	SW846 8260C	17-Jan-18	18-Jan-18	GMA	1800666	
91-20-3	Naphthalene	< 1.0		μg/l	1.0	0.4	1	"	"	"	"	"	
Surrogate r	recoveries:												
460-00-4	4-Bromofluorobenzene	99			70-13	0 %		"	"	"	"	"	
2037-26-5	Toluene-d8	101			70-13	0 %		"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	100		70-130 %				"	"	"	"	"	
1868-53-7	Dibromofluoromethane	104		70-130 %				u	"	"	"	"	

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### **Volatile Organic Compounds - Quality Control**

nalyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limi
W846 8260C										
atch 1800666 - SW846 5030 Water MS										
Blank (1800666-BLK1)					Pre	epared & Ar	nalyzed: 17-	-Jan-18		
Benzene	< 1.0		μg/l	1.0						
Naphthalene	< 1.0		μg/l	1.0						
Surrogate: 4-Bromofluorobenzene	50.2		μg/l		50.0		100	70-130		
Surrogate: Toluene-d8	49.9		μg/l		50.0		100	70-130		
Surrogate: 1,2-Dichloroethane-d4	47.8		μg/l		50.0		96	70-130		
Surrogate: Dibromofluoromethane	51.1		μg/l		50.0		102	70-130		
LCS (1800666-BS1)	Prepared & Analyzed: 17-Jan-18									
Benzene	22.4		μg/l		20.0		112	70-130		
Naphthalene	20.2		μg/l		20.0		101	70-130		
Surrogate: 4-Bromofluorobenzene	51.7		μg/l		50.0		103	70-130		
Surrogate: Toluene-d8	50.5		μg/l		50.0		101	70-130		
Surrogate: 1,2-Dichloroethane-d4	46.7		μg/l		50.0		93	70-130		
Surrogate: Dibromofluoromethane	51.3		μg/l		50.0		103	70-130		
LCS Dup (1800666-BSD1)					Pre	epared & Ar	nalyzed: 17-	-Jan-18		
Benzene	21.7		μg/l		20.0		109	70-130	3	20
Naphthalene	20.6		μg/l		20.0		103	70-130	2	20
Surrogate: 4-Bromofluorobenzene	51.4		μg/l		50.0		103	70-130		
Surrogate: Toluene-d8	50.6		μg/l		50.0		101	70-130		
Surrogate: 1,2-Dichloroethane-d4	46.8		μg/l		50.0		94	70-130		
Surrogate: Dibromofluoromethane	51.1		μg/l		50.0		102	70-130		

### Semivolatile Organic Compounds by GCMS - Quality Control

nalyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
W846 8270D SIM										
atch 1800581 - SW846 3510C										
Blank (1800581-BLK2)					Pre	epared: 16-	Jan-18 Ana	alyzed: 23-Ja	an-18	
Acenaphthene	< 0.051		μg/l	0.051						
Acenaphthylene	< 0.051		μg/l	0.051						
Anthracene	< 0.051		μg/l	0.051						
Benzo (a) anthracene	< 0.051		μg/l	0.051						
Benzo (a) pyrene	< 0.051		μg/l	0.051						
Benzo (b) fluoranthene	< 0.051		μg/l	0.051						
Benzo (g,h,i) perylene	< 0.051		μg/l	0.051						
Benzo (k) fluoranthene	< 0.051		μg/l	0.051						
Chrysene	< 0.051		μg/l	0.051						
Dibenzo (a,h) anthracene	< 0.051		μg/l	0.051						
Fluoranthene	< 0.051		μg/l	0.051						
Fluorene	< 0.051		μg/l	0.051						
Indeno (1,2,3-cd) pyrene	< 0.051		μg/l	0.051						
Naphthalene	< 0.051		μg/l	0.051						
Phenanthrene	< 0.051		μg/l	0.051						
Pyrene	< 0.051		μg/l	0.051						
Surrogate: Benzo (e) pyrene-d12	0.806		μg/l		1.02		79	30-130		
LCS (1800581-BS2)	0.000		рул			enared: 16.		alvzed: 23-Ja	an_18	
Acenaphthene	0.546		μg/l	0.051	1.02	spared. 10-	54	40-140	<u> </u>	
Acenaphthylene	0.546		μg/l	0.051	1.02		56	40-140		
Anthracene	0.598			0.051	1.02		59	40-140		
	0.724		μg/l	0.051	1.02		71	40-140		
Benzo (a) anthracene			μg/l				65	40-140		
Benzo (a) pyrene	0.666		μg/l	0.051	1.02					
Benzo (b) fluoranthene	0.673		μg/l	0.051	1.02		66	40-140		
Benzo (g,h,i) perylene	0.598		μg/l	0.051	1.02		59	40-140		
Benzo (k) fluoranthene	0.729		μg/l "	0.051	1.02		71	40-140		
Chrysene	0.709		μg/l "	0.051	1.02		70	40-140		
Dibenzo (a,h) anthracene	0.635		μg/l "	0.051	1.02		62	40-140		
Fluoranthene	0.704		μg/l	0.051	1.02		69	40-140		
Fluorene	0.662		μg/l	0.051	1.02		65	40-140		
Indeno (1,2,3-cd) pyrene	0.680		μg/l	0.051	1.02		67	40-140		
Naphthalene	0.535		μg/l	0.051	1.02		52	40-140		
Phenanthrene	0.624		μg/l	0.051	1.02		61	40-140		
Pyrene	0.679		μg/l	0.051	1.02		67	40-140		
Surrogate: Benzo (e) pyrene-d12	0.541		μg/l		1.02		53	30-130		
LCS Dup (1800581-BSD2)					Pre	epared: 16-	Jan-18 Ana	alyzed: 23-Ja	an-18	
Acenaphthene	0.623		μg/l	0.051	1.02		61	40-140	13	20
Acenaphthylene	0.626		μg/l	0.051	1.02		61	40-140	10	20
Anthracene	0.602		μg/l	0.051	1.02		59	40-140	0.7	20
Benzo (a) anthracene	0.695		μg/l	0.051	1.02		68	40-140	4	20
Benzo (a) pyrene	0.640		μg/l	0.051	1.02		63	40-140	4	20
Benzo (b) fluoranthene	0.659		μg/l	0.051	1.02		65	40-140	2	20
Benzo (g,h,i) perylene	0.607		μg/l	0.051	1.02		60	40-140	2	20
Benzo (k) fluoranthene	0.683		μg/l	0.051	1.02		67	40-140	7	20
Chrysene	0.699		μg/l	0.051	1.02		69	40-140	1	20
Dibenzo (a,h) anthracene	0.645		μg/l	0.051	1.02		63	40-140	2	20
Fluoranthene	0.687		μg/l	0.051	1.02		67	40-140	2	20
Fluorene	0.767		μg/l	0.051	1.02		75	40-140	15	20
Indeno (1,2,3-cd) pyrene	0.632		μg/l	0.051	1.02		62	40-140	7	20
Naphthalene	0.588		μg/l	0.051	1.02		58	40-140	9	20

### Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>SW846 8270D SIM</u>										
Batch 1800581 - SW846 3510C										
LCS Dup (1800581-BSD2)					Pre	epared: 16-J	an-18 An	alyzed: 23-Ja	an-18	
Phenanthrene	0.684		μg/l	0.051	1.02		67	40-140	9	20
Pyrene	0.697		μg/l	0.051	1.02		68	40-140	3	20
Surrogate: Benzo (e) pyrene-d12	0.561		μg/l		1.02		55	30-130		

### **Extractable Petroleum Hydrocarbons - Quality Control**

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>EPA 1664B</u>										
Batch 1800667 - General Preparation SVOC										
Blank (1800667-BLK1)					Pre	epared: 17-	Jan-18 An	alyzed: 18-Ja	an-18	
Oil & Grease	< 1.03		mg/l	1.03						
LCS (1800667-BS1)					Pre	epared: 17-	Jan-18 An	alyzed: 18-Ja	an-18	
Oil & Grease	36.9		mg/l	1.02	40.4		91	78-114		

### **General Chemistry Parameters - Quality Control**

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
ASTM D 1293-99B										
Batch 1800638 - General Preparation										
Reference (1800638-SRM1)					Pre	epared: 16-	Jan-18 An	alyzed: 18-Ja	<u>an-18</u>	
рН	6.03		pH Units		6.00		100	97.5-102. 5		
Reference (1800638-SRM2)					Pre	epared: 16-	Jan-18 An	alyzed: 18-Ja	<u>an-18</u>	
рН	6.01		pH Units		6.00		100	97.5-102. 5		
SM2540D (11)										
Batch 1800754 - General Preparation										
Blank (1800754-BLK1)					Pre	epared: 19-	Jan-18 An	alyzed: 20-Ja	<u>ın-18</u>	
Total Suspended Solids	< 0.5		mg/l	0.5						
LCS (1800754-BS1)					Pre	epared: 19-	Jan-18 An	alyzed: 20-Ja	n-18	
Total Suspended Solids	92.0		mg/l	10.0	100		92	90-110		

### **Notes and Definitions**

dry Sample results reported on a dry weight basis

NR Not Reported

RPD Relative Percent Difference

OG The required Matrix Spike and Matrix Spike Duplicate (MS/MSD) for Oil & Grease method 1664B can only be analyzed

when the client has submitted sufficient sample volume. An extra liter per MS/MSD is required to fulfill the method QC criteria. Please refer to Chain of Custody and QC Summary (MS/MSD) of the Laboratory Report to verify ample sample

volume was submitted to fulfill the requirement.

pH The method for pH does not stipulate a specific holding time other than to state that the samples should be analyzed as

soon as possible. For aqueous samples the 40 CFR 136 specifies a holding time of 15 minutes from sampling to analysis. Therefore all aqueous pH samples not analyzed in the field are considered out of hold time at the time of sample receipt.

All soil samples are analyzed as soon as possible after sample receipt.

<u>Laboratory Control Sample (LCS)</u>: A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

<u>Matrix Spike</u>: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

<u>Method Blank</u>: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

<u>Surrogate</u>: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

<u>Continuing Calibration Verification:</u> The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

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Report To:

4ndrew 3100

helsen MA.

astern

## Spectrum A

			10 CO1810
		1	Special Handling:
			Standard TAT - 7 to 10 business days
	CHAIN OF CUSTODY RECORD		Rush TAT - Date Needed:
ectrum Analytical	Page of		All TATs subject to laboratory approval  Min. 24-hr notification needed for rushes  Samples disposed after 30-days unless otherwise instructed.
Adams	Invoice To: Christopher Cill	Project No:	Gulf Chelson
1 67 1		Site Name:	Cult Chelson Terminal
JA COLFO	Wellesie V MA 02481-3705	Location:	281 Eastern Ave. State: MA
14-2380		$\sim$	Aleksander Marinkovic
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Analyze	send report to J	X	*	lor	Corecction Factor		5	1/10/10		- 1-	De la	The state of the s	18	1	1
Analytic   Actions   Actions   Action	O OLECOM.	jenni	E-mail to:		Observed	the state of the s	#	x 12	A		STAN STAN	rese 		11-	1/4
Analysis   Ponior   Analysis   Ponior   Analysis   Ponior   Analysis   Ponior   Po		at:	EDD form		Temp		11	Date:	<u></u>	1	Received by:			quished by:	/Relin
1-1/4/5/20, 2-HC  3-H/5/0, 4-H/5/0, 5-NaOH 6-Acorbic Acid   12=     2     3			<u>est</u>			-		4						0	
Things   Time:   Tim			D-												
Andrew Adams			ME.												
This_520, 2-HCl 3-H <sub>5</sub> SO, 4-HNO, 5-NaOH 6-Ascorbic Acid   List Preservative Code below: * additional changes may appply   HSO <sub>4</sub> 9=Detonized Water_10-H <sub>5</sub> PO <sub>4</sub>   11=   12=   2								-							
Analysis								2		•		Blank	1	78-	60
Andrew   Adams   PONo:   Quote #:     Andrew   Adams			~					_		0			Par 00	Out	1
Andrew   Adams   A constant   Andrew			<			-				10		3	full do	100t	
And   And   Add   And				<		-				0	1		Fall 00	Oct	
Andrew   Adems   Pono:   Quote#:								2		0	-		-tall 00	00+	
Andrew Adams   Pononized Water   Andrew Adams   Pononized Water   Andrew					<			(V)		0			Call 00.	Out	43162-01
Andrew Adams  PONO::  Duote #:    According Notes:   Pono:   P			f	1-	V	# of	# of	-	Ma				Sample ID:	9	Lab ID:
Andrew   Adams   P.O.No.:   Quote #:     AECP      Adams   AECP    Adams   AECP    Adams   AECP    Adams   AECP    Adams   AECP    Adams   AECP    Adams   AECP    Adams   AECP    Adams   AECP    Additional charges may apply.   Additional charges may ap	Tier II*	);	H	TSS	σc.	Plasti	Clear		atrix	ype	C=Compsite			= Grab	0
Andrew   Adams   P.O.No.:   Quote #:   AECP	ASP A*	- ()-	10	S	(Ber No	С	Glass		1 1		X3=		X2=		=1X
Andrew Adams P.O.No.: Quote #:   1=Na <sub>2</sub> S2O <sub>3</sub> 2=HCl 3=H <sub>2</sub> SO <sub>4</sub> 4=HNO <sub>3</sub> 5=NaOH 6=Ascorbic Acid   NaHSO <sub>4</sub> 9=Deionized Water 10=H <sub>3</sub> PO <sub>4</sub> 11= 12=   Vater GW=Groundwater SW=Surface Water WW=Waste Water Containers Analysis    Analysis  Analysis	Standard No QC				12,	, 6		S				/Ambient Ai		7.0	O=Oil SO=Soil
Andrew         Adams         P.O No::         Quote #:         AECON           1=Na <sub>2</sub> S2O <sub>3</sub> 2=HCl         3=H <sub>2</sub> SO <sub>4</sub> 4=HNO <sub>3</sub> 5=NaOH         6=Ascorbic Acid         List Preservative Code below:           NaHSO <sub>4</sub> 9=Deionized Water 10=H <sub>3</sub> PO <sub>4</sub> 11=         12=         2           3           3           3           3           3           4           4           5           4           5           6           6           6           6           7	Report? Yes	S	Analysi				ontainer			e Water		W=Surface			DW=Drinking Water
Andrew         Adems         P.O.No.:         Quote #:         AECON           1=Na <sub>2</sub> S2O <sub>3</sub> 2=HCl         3=H <sub>2</sub> SO <sub>4</sub> 4=HNO <sub>3</sub> 5=NaOH         6=Ascorbic Acid         List Preservative Code below:           NaHSO,         9=Deignized Water 10=H <sub>2</sub> PO,         11=         12=	auditional chaiges may applyly		W		2)						6(8)	1	À	4	
Adams P.O.No.: Quote #:	QA/QC Reporting Notes:	Code below:	servative (	List Pre					bic Acid		=		2=HCl 3=	1=Na <sub>2</sub> S2O <sub>3</sub>	F=Field Filtered 7=CH3OH 8=Nal
	ECOM	A					Quote #:_			0.0 No.:		ams	Ad	Andi	Project Mgr:
(K17) 884-5980 Sampler(s): Aleksander Marinkovic		A	Sampler(s):									0865	5-188	417	Telephone #:

Ambient Iced

Refrigerated DI VOA Frozen

Soil Jar Frozen

eurofir	
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# CHAIN OF CUSTODY RECORD

Page / of /

Spectrum Analytical

Special	CD
Hand	18
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	1
Rush TAT - Date Needed:	Standard TAT - 7 to 10 business days
1	

Cult Chelses	Samples disposed after 30 days unless otherwise instructed.	Min. 24-hr notification needed for rushes	All TATs subject to laboratory approval	

OA/OC Beneating Notes:	List Preservative Code below:	List Pres	F=Field Filtered 1=Na <sub>2</sub> S2O <sub>3</sub> 2=HCl 3=H <sub>2</sub> SO <sub>4</sub> 4=HNO <sub>3</sub> 5=NaOH 6=Ascorbic Acid	3=H2SO4 $4=HNO3$	2=HCI	1=Na <sub>2</sub> S2O <sub>3</sub>	F=Field Filtered
357	AECOM	Quote #:	P.O No.:	dans	Andrew Adams	And	Project Mgr:
Aleksander Marinkovic	Sampler(s): Hicksand		6	0865-188 (+19)	1884	(6/7	Telephone #:
281 Eastern Ave. State: MA	Location: 281 East	Wellesley, MA 02481-3705	Welle	Chelsen MA. 02150	Ca MA	Chelsi	
Cuchen I commen	Site Name:	80 William Street Suite 400	080	281 Eastern Ave.	Faster	281	
PIP Chile Tornin			0016	87	CULE OIL LA	Bule	
Gulf Chelson	Project No: Cult	Christopher Gill	Invoice To: Chris	lans	V Ad	Andrew Adam	Report To:
				The same of the sa	-		

	Relinquished by:					02 TB-1 (TripBlank	+ Output DO3	Outfall oas	Outfall 003	Outfall 003	43152-01 Outfall 003	Lab ID: Sample ID:	G= Grab	X1=X2=	O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air	<b>DW</b> =Drinking Water GW=Groundwater SW=S		F=Field Filtered 1=Na <sub>2</sub> S2O <sub>3</sub> 2=HCl 3=H <sub>2</sub> SO <sub>4</sub> 7=CH3OH 8=NaHSO <sub>4</sub> 9=Deionized Water 10=H <sub>3</sub> PO <sub>4</sub>	Project Mgr: Andrew Adams
N &	Received by:				,	\$ K	1-13-18 1110	1-13-18 1110	1-13-18 1110	1-13-18 1110	1-13-18 1110	Date: Time:	C=Compsite	X3=	oient Air SG=Soil Gas	SW=Surface Water WW=Waste Water		4=HNO <sub>3</sub> 5=NaOH 11=	P.O No.:
4-13-18 4-4r	Date: K // Time: S					N		811111111111111111111111111111111111111	square.	2	Sw 3	# of # of	trix VOA  Amber Clear (	Glass		Containers		6=Ascorbic Acid	Quote #:
D. E-mail to: Jennit	nat:		1,5			.4	<		<		<	Vo Pi 7	AHS SS H		z, pth)	Analysis	2 3	List Preservative Code below:	T.
enniter. atkins ( accom. com		o RILLII Sal		a mo to a company								Other: State-specific reporting standards:	if c NJ Reduced* NJ Full*  Ther II* Ther IV*	ASP A*	CT DPH RO	Report?	auditional charges may applyiy	QA/QC Reporting Notes:	ECOM

Condition upon receipt: Custody Seals: Present Intact Broken



This preceding chain of custody has been amended to include the client requested additional analyses as noted below:

Laboratory ID	Client ID	Analysis	Added
SC43152-01	Outfall 003	SVOCs by SIM	1/25/2018

### **Batch Summary**

	Batch Summary
1800581	S815859-CAL2
Semivolatile Organic Compounds by GCMS	S815859-CAL3
1800581-BLK2	S815859-CAL4
1800581-BS2	S815859-CAL5
1800581-BSD2	S815859-CAL6
SC43152-01 (Outfall 003)	S815859-CAL7
3C43132-01 (Outlan 003)	S815859-CAL8
<u>1800638</u>	S815859-CAL9
General Chemistry Parameters	S815859-CALA
1800638-SRM1	S815859-ICV1
1800638-SRM2	S815859-LCV1
	S815859-LCV2
SC43152-01 (Outfall 003)	S815859-TUN1
<u>1800666</u>	<u>S815896</u>
<u>Volatile Organic Compounds</u>	Volatile Organic Compounds
1800666-BLK1	
1800666-BS1	S815896-CAL1 S815896-CAL2
1800666-BSD1	S815896-CAL2 S815896-CAL3
SC43152-01 (Outfall 003)	S815896-CAL3 S815896-CAL4
SC43152-02 (TB-1)	S815896-CAL4 S815896-CAL5
	S815896-CAL5 S815896-CAL6
<u>1800667</u>	S815896-CAL7
Extractable Petroleum Hydrocarbons	S815896-CAL8
1800667-BLK1	S815896-CAL9
1800667-BS1	S815896-ICV1
SC43152-01 (Outfall 003)	S815896-LCV1
,	S815896-LCV2
<u>1800754</u>	S815896-LCV3
General Chemistry Parameters	S815896-TUN1
1800754-BLK1	
1800754-BS1	<u>8816003</u>
SC43152-01 (Outfall 003)	Volatile Organic Compounds
	S816003-CCV1
<u>\$711062</u>	S816003-TUN1
Semivolatile Organic Compounds by GCMS	
S711062-CAL1	<u>8816170</u>
S711062-CAL2	Semivolatile Organic Compounds by GCMS
S711062-CAL3	S816170-CCV1
S711062-CAL4	S816170-TUN1
S711062-CAL5	
S711062-CAL6	<u>8816176</u>
S711062-CAL7	Semivolatile Organic Compounds by GCMS
S711062-CAL8	S816176-CCV1
S711062-CAL9	S816176-TUN1
\$711062-ICV1	
S711062-LCV1	<u>S816216</u>
\$711062-LCV2	Semivolatile Organic Compounds by GCMS
S711062-TUN1	S816216-CCV1

S816216-TUN1

### S815859

Semivolatile Organic Compounds by GCMS

S815859-CAL1